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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,347	08/27/2001	Shigetoshi Nouda	450100-03396	4911
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FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			EXAMINER CHEN, WENPENG	
			ART UNIT 2624	PAPER NUMBER
			DATE MAILED: 09/10/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/940,347

Applicant(s)

NOUDA, SHIGETOSHI

Examiner

Wenpeng Chen

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

***Drawings***

1. Figure 6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification lists several key equations without explicit definition to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make the method or apparatus. Specific examples are given below.

a. In page 14, the specification states: " The special reversible S transformation refers to reversible S transformation, which performs transformation processing using an appropriate transformation coefficient that satisfies a condition for reversibility, and transformation that performs shift transformation processing and constant-range transformation processing for maintaining a constant range." The constant-range transformation is described in the second paragraph of page 15 as "Constant-range transformation processing is intended to maintain a constant range. The constant-range transformation processing will hereinafter be expressed as  $m[\ ]$ ."

-- How can one skilled in the art follow this description to implement the constant-range transformation processing?

-- The specification defines the special reversible S transformation  $srs\{\}$ , which includes the reversible S transformation of the equations (6), in Equation 7 which is  $h_n = \text{round} \{srs\{\text{round}\{m\{(a_{n_m} i_n), s\}\}\}\}$ .

What does  $(a_{n_m} i_n)$  mean? There are at least two values:  $a_{n_m}$  and  $i_n$ . How does the s processing of the shift processing operate on these two values? For example, if  $a_{n_m} = 1.2$  and  $i_n = 0.5$ , what will be the result of the s processing?

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What does  $m\{(a\_n\_m\ i\_n), s\}$  mean? Given the resultant value of  $\{(a\_n\_m\ i\_n), s\}$ , there is no teaching how  $m$ , the constant-range transformation processing, operates on the resultant value. Suppose the resultant value is 2.5, how can one apply the undefined "m function" to generate a result?

Furthermore, what is the definition of  $srs\{a\ \text{value}\}$ ? Suppose the "m function" generates 3.5, how can one obtain  $srs\{3.5\}$ ?

-- Equation 8 defines " $h\_n = \text{round}\{srs'\{\text{round}\{m\{(a\_n\_m\ i\_n, P\_n), s\}\}\}\}$ ". What does  $(a\_n\_m\ i\_n, P\_n)$  mean?

-- The meaning of equation 10 is not clear.

b. The specification describes "optimum selection function transformation" in equations 14 and 15. Equation 14 depends on the maximum of similarity of  $S_m$ . Equation 15 depends on the minimum of distance  $D_m$ . The specification does not teach one skilled in the art to obtain  $S_m$  or  $D_m$  from provided elements.

c. The meaning of equation 16 is not clear.

d. Both Claims 1 and 8 recite the limitation of "subjecting a referable pixel present around the periphery of a pixel to be predicted to *special reversible S (Sequential) transformation*, which is transformation including *shift transformation* and *constant-range transformation* and using a transformation coefficient that satisfies a condition for reversibility, according to context modeling that performs *adaptive processing on the basis of context* of the referable peripheral pixel, thereby calculating an initial prediction value of said pixel to be predicted." As explained above, the specification does not enable one skilled in the art to which

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it pertains, or with which it is most nearly connected, to implement the above highlighted features.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the following reasons.

Both Claims 1 and 8 recite the limitation of "subjecting a referable pixel present around the periphery of a pixel to be predicted to *special reversible S (Sequential) transformation*, which is transformation including *shift transformation* and *constant-range transformation* and using a transformation coefficient that satisfies a condition for reversibility, according to context modeling that performs adaptive processing on the basis of context of the referable peripheral pixel, thereby calculating an initial prediction value of said pixel to be predicted." As explained above, the meanings of the above highlighted features are not defined.

Therefore, Claims 1-8 are indefinite.

***Examiner's Comment***

7. Because Claims 1-8 are so indefinite, the Examiner cannot make reasonable comparison between these claims and the prior art. The Examiner lists the relevant prior art in form PTO-892. At this moment, they are not relied upon for comparison of the claims.

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***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 703 306-2796. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications. TC 2600's customer service number is 703-306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Wenpeng Chen  
Primary Examiner  
Art Unit 2624

September 8, 2004



9/8/04